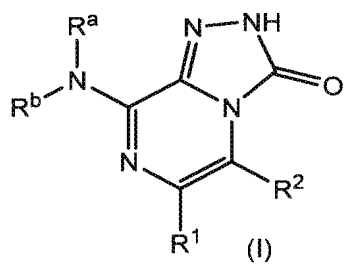


1. (currently amended) A compound of formula (I)



~~the prodrugs thereof, and the pharmaceutically acceptable salts of the compounds and prodrugs, or a pharmaceutically acceptable salt thereof~~ wherein:

R<sup>a</sup> and R<sup>b</sup> are, independently:

- (1) hydrogen;
- (2) acetyl;
- (3) -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally, and independently, substituted with from one to three:

(A) cyano; (B) halogen; (C) -NR<sup>3</sup>R<sup>4</sup>; (D) -COR<sup>5</sup>; (E) -OR<sup>6</sup>; (F) -SR<sup>6</sup>; (G) -S(O)R<sup>6</sup>; (H) -SO<sub>2</sub>R<sup>6</sup>; (I) aryl, optionally substituted independently with from one to three halogen; nitro; -SO<sub>2</sub>NH<sub>2</sub>; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; methylenedioxy; -COR<sup>5</sup>; or -OR<sup>6</sup>; (J) heteroaryl, optionally substituted independently with from one to three hydroxy; nitro; halogen; -OR<sup>6</sup>; aryl, optionally substituted independently with -(C<sub>1</sub>-C<sub>6</sub>)alkyl; heteroaryl; trifluoromethyl; or -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted with hydroxy; (K) -(C<sub>3</sub>-C<sub>11</sub>)cycloalkyl, optionally substituted independently with from one to three cyano; -COR<sup>5</sup>; or -CH<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>; or (L) -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl, optionally substituted independently with from one to three -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted with aryl; -COR<sup>5</sup>; aryl, optionally substituted independently with halogen; oxo; or -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; wherein:

R<sup>3</sup> and R<sup>4</sup> are independently:

- (a) hydrogen; (b) -SO<sub>2</sub>R<sup>6</sup>; (c) aryl, optionally substituted independently with from one to three halogen; cyano; nitro; -(C<sub>1</sub>-C<sub>6</sub>)alkyl, -(C<sub>1</sub>-C<sub>6</sub>)alkoxy, or -COR<sup>5</sup>; (d) -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted independently with from one to three -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl; -(C<sub>3</sub>-C<sub>11</sub>)cycloalkyl; -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; aryl; or heteroaryl; (e) heteroaryl, optionally substituted independently with from one to three halogen; trifluoromethyl; cyano; nitro; -COR<sup>5</sup>; -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted with -(C<sub>3</sub>-

C<sub>11</sub>)heterocycloalkyl; or -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; (f) -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl, optionally substituted independently with from one to three -(C<sub>1</sub>-C<sub>6</sub>)alkyl; or (g) -COR<sup>5</sup>; or

R<sup>3</sup> and R<sup>4</sup>, taken together with the nitrogen atom to which they are attached, form a 5- or 6-membered heterocycloalkyl ring, optionally having from one to three additional heteroatoms independently selected from nitrogen, oxygen, and sulfur, wherein said 5- or 6-membered heterocycloalkyl ring is optionally substituted independently with from one to three -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted with aryl;

R<sup>5</sup> is (h) hydroxy; (i) -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted independently with from one to three -CO<sub>2</sub>H; -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; or aryl; (j) -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; (k) aryl, optionally substituted with halogen; (l) heteroaryl; or (m) -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl, optionally substituted independently with from one to three oxo; -CO<sub>2</sub>H; or -(C<sub>1</sub>-C<sub>6</sub>)alkyl; and

R<sup>6</sup> is (n) hydrogen; (o) -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted independently with from one to three hydroxy; -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; aryl, optionally substituted with halogen; or heteroaryl, optionally substituted with -CH<sub>2</sub>NR<sup>3</sup>R<sup>4</sup>; (p) aryl, optionally substituted independently with from one to three halogen; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; cyano; trifluoromethyl; or -OR<sup>6</sup>; (q) heteroaryl, optionally substituted independently with from one to three amino; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; or -COR<sup>5</sup>; or (r) -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl, optionally substituted independently with from one to three -(C<sub>1</sub>-C<sub>6</sub>)alkyl;

(4) -(C<sub>3</sub>-C<sub>11</sub>)cycloalkyl; or

(5) -(C<sub>3</sub>-C<sub>11</sub>)heterocycloalkyl, optionally substituted independently with from one to three halogen; -COR<sup>5</sup>; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; or -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; or

R<sup>a</sup> and R<sup>b</sup>, taken together with the nitrogen atom to which they are attached, form a 5- or 6-membered heterocycloalkyl ring, optionally having from one to three additional heteroatoms independently selected from the group consisting of nitrogen, oxygen, and sulfur, wherein said 5- or 6-membered heterocycloalkyl ring is optionally, and independently, substituted with from one to three halogen; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; or heteroaryl, optionally substituted independently with from one to three halogen; trifluoromethyl; and cyano; and

R<sup>1</sup> and R<sup>2</sup> are, independently, ~~(ii)~~ (i) hydrogen; ~~(iii)~~ (ii) halogen; ~~(iv)~~ (iii) aryl, optionally substituted independently with from one to three halogen; cyano; -(C<sub>1</sub>-C<sub>6</sub>)alkyl; -(C<sub>1</sub>-C<sub>6</sub>)alkoxy; -COR<sup>5</sup>; or -CONR<sup>3</sup>R<sup>4</sup>; ~~(v)~~ (iv) -(C<sub>1</sub>-C<sub>6</sub>)alkyl, optionally substituted independently with from one to three aryl, optionally substituted

independently with from one to three halogen or trifluoromethyl; heteroaryl;  $-\text{CONR}^3\text{R}^4$ ; or hydroxy; ~~(vii)~~ (v)  $-\text{COR}^5$ ; ~~(viii)~~ (vi)  $-\text{CONR}^3\text{R}^4$ ; or ~~(ix)~~ (vii)  $-(\text{C}_1-\text{C}_6)\text{cycloalkyl}$ , optionally substituted independently with from one to three  $-\text{COR}^5$ .

2. (currently amended) A The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein:

$\text{R}^a$  and  $\text{R}^b$  are, independently:

(1) hydrogen;

(3)  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ , optionally, and independently, substituted with from one to three:

(A) cyano; (B) halogen; (C)  $-\text{NR}^3\text{R}^4$ ; (D)  $-\text{COR}^5$ ; (E)  $-\text{OR}^6$ ; (F)  $-\text{SR}^6$ ; (G)  $-\text{S(O)}\text{R}^6$ ; (H)  $-\text{SO}_2\text{R}^6$ ; (I) aryl, optionally substituted independently with from one to three halogen; nitro;  $-\text{SO}_2\text{NH}_2$ ;  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ ; methylenedioxy;  $-\text{COR}^5$ ; or  $-\text{OR}^6$ ; (J) heteroaryl, optionally substituted independently with from one to three hydroxy; nitro; halogen;  $-\text{OR}^6$ ; aryl, optionally substituted independently with  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ ; heteroaryl; trifluoromethyl; or  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ , optionally substituted with hydroxy; (K)  $-(\text{C}_3-\text{C}_{11})\text{cycloalkyl}$ , optionally substituted independently with from one to three cyano;  $-\text{COR}^5$ ; or  $-\text{CH}_2\text{NR}^3\text{R}^4$ ; or (L)  $-(\text{C}_3-\text{C}_{11})\text{heterocycloalkyl}$ , optionally substituted independently with from one to three  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ , optionally substituted with aryl;  $-\text{COR}^5$ ; aryl, optionally substituted independently with halogen; oxo; or  $-(\text{C}_1-\text{C}_6)\text{alkoxy}$ ; wherein:

$\text{R}^3$  and  $\text{R}^4$  are independently:

(a) hydrogen; (b)  $-\text{SO}_2\text{R}^6$ ; (c) aryl, optionally substituted independently with from one to three halogen; cyano; nitro;  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ ,  $-(\text{C}_1-\text{C}_6)\text{alkoxy}$ , or  $-\text{COR}^5$ ; (d)  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ , optionally substituted independently with from one to three  $-(\text{C}_3-\text{C}_{11})\text{heterocycloalkyl}$ ;  $-(\text{C}_3-\text{C}_{11})\text{cycloalkyl}$ ;  $-(\text{C}_1-\text{C}_6)\text{alkoxy}$ ; aryl; or heteroaryl; (e) heteroaryl, optionally substituted independently with from one to three halogen; trifluoromethyl; cyano; nitro;  $-\text{COR}^5$ ;  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ , optionally substituted with  $-(\text{C}_3-\text{C}_{11})\text{heterocycloalkyl}$ ; or  $-(\text{C}_1-\text{C}_6)\text{alkoxy}$ ; (f)  $-(\text{C}_3-\text{C}_{11})\text{heterocycloalkyl}$ , optionally substituted independently with from one to three  $-(\text{C}_1-\text{C}_6)\text{alkyl}$ ; or (g)  $-\text{COR}^5$ ; or

$\text{R}^3$  and  $\text{R}^4$ , taken together with the nitrogen atom to which they are attached, form a 5- or 6-membered heterocycloalkyl ring, optionally having from one to three additional

heteroatoms independently selected from nitrogen, oxygen, and sulfur, wherein said 5- or 6-membered heterocycloalkyl ring is optionally substituted with from one to three  $-(C_1-C_6)alkyl$ , optionally substituted with aryl;

$R^5$  is (h) hydroxy; (i)  $-(C_1-C_6)alkyl$ , optionally substituted independently with from one to three  $-CO_2H$ ;  $-(C_1-C_6)alkoxy$ ; or aryl; (j)  $-(C_1-C_6)alkoxy$ ; (k) aryl, optionally substituted with halogen; (l) heteroaryl; or (m)  $-(C_3-C_{11})heterocycloalkyl$ , optionally substituted independently with from one to three oxo;  $-CO_2H$ ; or  $-(C_1-C_6)alkyl$ ; and

$R^6$  is (n) hydrogen; (o)  $-(C_1-C_6)alkyl$ , optionally substituted independently with from one to three hydroxy;  $-(C_1-C_6)alkoxy$ ; aryl, optionally substituted with halogen; or heteroaryl, optionally substituted with  $-CH_2NR^3R^4$ ; (p) aryl, optionally substituted independently with from one to three halogen;  $-(C_1-C_6)alkyl$ ; cyano; trifluoromethyl; or  $-OR^6$ ; (q) heteroaryl, optionally substituted independently with from one to three amino;  $-(C_1-C_6)alkyl$ ;  $-(C_1-C_6)alkoxy$ ; or  $-COR^5$ ; or (r)  $-(C_3-C_{11})heterocycloalkyl$ , optionally substituted independently with from one to three  $-(C_1-C_6)alkyl$ ;

(4)  $-(C_3-C_{11})cycloalkyl$ ; or

(5)  $-(C_3-C_{11})heterocycloalkyl$ , optionally substituted independently with from one to three halogen;  $-COR^5$ ;  $-(C_1-C_6)alkyl$ ; or  $-(C_1-C_6)alkoxy$ ; and

$R^1$  and  $R^2$  are, independently, (ii) hydrogen; (iv) aryl, optionally substituted independently with from one to three halogen; cyano;  $-(C_1-C_6)alkyl$ ;  $-(C_1-C_6)alkoxy$ ;  $-COR^5$ ; or  $-CONR^3R^4$ ; or (v)  $-(C_1-C_6)alkyl$ , optionally substituted independently with from one to three aryl, optionally substituted independently with from one to three halogen or trifluoromethyl; heteroaryl;  $-CONR^3R^4$ ; or hydroxy.

3. (currently amended) ~~A~~ The compound of claim 1 or a pharmaceutically acceptable salt thereof, wherein:

$R^a$  and  $R^b$  are, independently:

(1) hydrogen;

(3)  $-(C_1-C_6)alkyl$ , optionally, and independently, substituted with one or two:

(A) cyano; (E)  $-OR^6$ ; (F)  $-SR^6$ ; (I) aryl, optionally substituted with nitro; (J) heteroaryl, optionally substituted independently with one or two  $-OR^6$  or  $-(C_1-C_6)alkyl$ ; or (L)  $-(C_3-C_{11})heterocycloalkyl$ , optionally substituted with oxo or  $-COR^5$ ; wherein  $R^6$  is

(n) hydrogen; (o)  $-(C_1-C_6)$ alkyl; (p) aryl, optionally substituted with cyano or  $-OR^6$ ; or (q) heteroaryl, optionally substituted with amino;  $-(C_1-C_6)$ alkyl;  $-(C_1-C_6)$ alkoxy; or  $-COR^5$ ;

(4)  $-(C_3-C_{11})$ cycloalkyl; or

(5)  $-(C_3-C_{11})$ heterocycloalkyl, optionally substituted with  $-COR^5$ ; wherein  $R^5$  is

(h) hydroxy; (i)  $-(C_1-C_6)$ alkyl; or (j)  $-(C_1-C_6)$ alkoxy; and

$R^1$  and  $R^2$  are, independently, hydrogen or  $-(C_1-C_6)$ alkyl.

4. (currently amended) A compound of claim 1 selected from the group consisting of:

~~5-[2-(6-*tert*-butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-nicotinic acid methyl ester;~~

5-[2-(6-*tert*-Butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-ethoxy]-nicotinic acid methyl ester;

8-[2-(3-aminopyridin-2-yloxy)-ethylamino]-6-*tert*-butyl-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

3-(6-*tert*-butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-propionitrile;

4-(6-*tert*-butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-piperidine-1-carboxylic acid ethyl ester;

3-[2-(6-*tert*-butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-ethoxy]-benzonitrile;

8-[2-(benzothiazol-2-ylamino)-ethylamino]-6-*tert*-butyl-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(4-methoxy-phenoxy)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(7-methyl-1H-benzimidazol-2-yl)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(pyridin-3-yloxy)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(pyridin-4-yloxy)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[3-(3,5-dimethyl-pyrazol-1-yl)-propylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(3-imidazol-1-yl-propylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(3-morpholin-4-yl-propylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[3-(2-oxo-pyrrolidin-1-yl)-propylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[(pyridin-3-ylmethyl)-amino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[(pyridin-4-ylmethyl)-amino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[(tetrahydro-furan-2-yl-methyl)-amino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(2-ethylsulfanyl-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(2-hydroxy-1-methyl-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(6-hydroxy-hexylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(2-methoxy-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(2-pyridin-3-yl-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(2-pyridin-4-yl-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(4-nitro-benzylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

4-(6-*tert*-butyl-3-oxo-2,3-dihydro-[1,2,4]triazolo[4,3-a]pyrazin-8-ylamino)-piperidine-1-carboxylic acid ethyl ester;

6-*tert*-butyl-8-[2-(2-methyl-pyridin-3-yloxy)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(2-methyl-pyridin-3-yl)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(6-methoxy-pyridin-3-yl)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-[2-(6-methyl-pyridin-3-yl)-ethylamino]-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-*tert*-butyl-8-(3-methoxy-propylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

6-isopropyl-5-methyl-8-(2-pyridin-3-yl-ethylamino)-2H-[1,2,4]triazolo[4,3-a]pyrazin-3-one;

~~a prodrug thereof, or a pharmaceutically acceptable salt thereof of said compound or said prodrug.~~

5. (currently amended) A pharmaceutical composition comprising an amount of a compound of claim 1, ~~a prodrug thereof, or a pharmaceutically acceptable salt of said compound or prodrug;~~ and a pharmaceutically acceptable carrier, vehicle, or diluent.

6. (canceled)

7. (currently amended) A method of ~~claim 6,~~ treating a glycogen synthase kinase 3-mediated condition, disease, or symptom in a mammal in need of such treatment which method comprises administering to said mammal a therapeutically effective amount of a compound of claim 1, or a pharmaceutically acceptable salt of said compound wherein said condition, disease, or symptom is Alzheimer's Disease, asthma, atherosclerosis, anxiety, bipolar disorder, cancer, diabetes, dementia, depression, frailty, hair loss, heart failure, essential hypertension, hyperglycemia, hyperlipidemia, hypoglycemia, inflammation, ischemia, male fertility and sperm motility, mood disorders, neuronal cell death, obesity, obsessive compulsive disorder, polycystic ovary disorder, schizophrenia, stroke, Syndrome X, or traumatic brain injury.

8.- 12. (canceled)

13. (new) The method of claim 7 wherein the glycogen synthase kinase 3 mediated disease is diabetes.